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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,535	09/30/2003	David W. Farchmin	110003.00051.03AB206	6083

7590 11/16/2005

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EXAMINER

SHUTE, DOUGLAS M

ART UNIT PAPER NUMBER

2121

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,535

Applicant(s)

FARCHMIN, DAVID W.

Examiner

Douglas M. Shute

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-39, 48 and 52-63 is/are allowed.
- 6) ☒ Claim(s) 1-27, 40-47, 49-51 and 64-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>see OFFICE ACTION</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-70 are presented for examination.

Information Disclosure Statement

2. The IDS listings (dated 9/6/05, 5/2/05, 3/8/05, 12/20/04, and 5/4/04) were corrected as necessary to eliminate duplicate citations and address other minor informalities.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 47 and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. Claim 1 recites the limitation "the plurality of components" in line 5. There is insufficient antecedent basis for this limitation in the claim.

6. Claims 12-17, 20, and 21 are rejected as being dependent ultimately upon the above rejected claim 1.

7. Claim 47 recites the limitation "also for use with an existing communication system ...". It is unclear how this further limits claim 46 from which it depends.

8. Claim 66 recites the limitation "the plurality of components" and "the controller". There is insufficient antecedent basis for these limitations in the claim.

9. Claims 67-70 are rejected as being either directly or ultimately upon the above rejected claim 66.

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Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 2, 4, 18, 19, 22-24, 40, 50, 51, and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by De Meyer et al. (US 2005/0021158 A1) (hereinafter De Meyer).

12. As per claim 1, as best understood, De Meyer shows an apparatus for use in an automated environment including at least a first automated assembly (e.g., Figure 11, element M4) including components that facilitate an automated process (e.g., Figure 11, elements AP5 and AP6), at least one portable wireless information device (WID) (e.g., Figure 11, element MU) and a

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controller for controlling the assembly (e.g., Figure 11, element CS), the apparatus comprising:

a first component that is one of the plurality of components and that is linked to the controller to facilitate at least a sub-process associated with the automated process (e.g., Figure 11, element AP5), the first component including at least a first wireless receiver for receiving wireless signals from the at least one WID (e.g., Figure 11, portion of element AP5, paragraph [0077], "The receiving devices..."); and

a processor receiving signals from the first receiver for determining the location of the at least one WID as a function of the signals received therefrom (e.g., paragraph [0077], "The position ... central server"). De Meyer does not specifically show the processor running location determining software. However, it would have been inherent that a processor would utilize software to achieve its tasks as this is a well-known processing mechanism.

13. As per claim 2, it is rejected for reasons as given above for claim 1. Further, De Meyer shows that the first component could be a stationary human-machine interface (HMI) device (e.g., paragraph [0004], "... stationary or mobile devices") which is a well-known component of any control system.

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14. As per claim 4, it is rejected for reasons as given above for claim 2. De Meyer does not specifically show that the first receiver includes a wireless antenna. However, it would have been inherent that the first receiver would include a wireless antenna as this is a well-known element in any wireless system or device.

15. As per claim 18, it is rejected for reasons as given above for claim 1. Further, De Meyer shows including a wireless data system linked to the controller for transmitting data to and receiving data from the at least one WID (e.g., Figure 8, elements AP5 and AP6 along with double-headed arrows attached thereto).

16. As per claim 19, it is rejected for reasons as given above for claim 18. Further, De Meyer shows the wireless data system includes data receivers that are separate from the first receiver (e.g., Figure 11, a portion of element AP6).

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17. As per claim 22, it is rejected for reasons as given above for claim 1. Further, De Meyer shows the first component includes a transmitter for wirelessly transmitting data (e.g., Figure 8, element AP5, paragraph [0076]).

18. As per claim 23, De Meyer shows a system comprising:
a controller for controlling an automated assembly (e.g., Figure 11, element CS);
at least one portable wireless information device (WID) that transmits wireless signals (e.g., Figure 11, element MU);
at least a first automated assembly including a plurality of components (e.g., Figure 11, elements AP5 and AP6) that together facilitate an automated process (Figure 11, element M4), the plurality of components including a first component linked to the controller to facilitate at least a sub-process associated with the automated process (e.g., Figure 11, element AP5), the first component including a wireless receiver for receiving signals from the at least one WID (e.g., Figure 11, portion of element AP5, paragraph [0077], "The receiving devices..."); and a processor linked to the first component for obtaining signals from the receiver for determining the location of the at least one WID as a function of the received signals (e.g., paragraph [0077], "The position ... central server").

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De Meyer does not specifically show the processor running location determining software. However, it would have been inherent that a processor would utilize software to achieve its tasks as this is a well-known processing mechanism.

19. As per claim 24, it is rejected for reason as given above for claim 23 and for reasons similar to those given above for claim 2.

20. As per claim 40, De Meyer shows a method for use in an automated environment including at least a first automated assembly (e.g., Figure 11, element M4), at least one portable wireless information device (WID) (e.g., Figure 11, element MU) and a controller for controlling the assembly (e.g., Figure 11, element CS), the assembly including a plurality of components provided to facilitate an automated assembly process (e.g., Figure 11, elements AP5 and AP6), the plurality of components including a first component linked to the controller to facilitate an assembly sub-process (e.g., Figure 11, element AP5), the method comprising the steps of:
equipping the first component with a wireless receiver for receiving wireless signals from the at least one WID (e.g., Figure 11, portion of element AP5, paragraph [0077], "The

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receiving devices..."); receiving WID signals via the receiver (e.g., paragraph [0077]); and using the received signals to determine WID location (e.g., paragraph [0077]).

21. As per claim 50, it is rejected for reasons as given above for claim 40. Further, De Meyer shows the method includes providing a processor, linking the processor to the first component via a communication network, transmitting the receiver signals via the communication network to the processor (e.g., paragraph [0077]). De Meyer does not specifically show performing an algorithm via the processor to determine WID location but it is inherent that a processor used to determine WID location would utilize an algorithm.

22. As per claim 51, it is rejected for reasons as given above for claim 50. Further, De Meyer shows the method further including the step of linking additional receivers to the processor (e.g., Figure 11, portions of elements AP5 and AP6), obtaining additional WID signals via the additional receivers (e.g., paragraph [0077]) and providing the additional WID signals to the processor via the communication network (e.g., Figure 11, element CS), the step of using further including using at least a sub-set of the signals received from each of

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the receivers to determine WID location (e.g., paragraph [0077]).

23. As per claim 64, De Meyer shows a method for use in an automated environment including a plurality of automated assemblies (e.g., Figure 11, elements M3 and M4), at least one portable wireless information device (WID) (e.g., Figure 11, element MU) and at least one controller for controlling the assemblies (e.g., Figure 11, element CS), each assembly including a plurality of components provided to facilitate an automated assembly process (e.g., Figure 11, AP3, AP4, AP5, AP6), at least a first sub-set of the assembly components linked to the controller to at least one of provide signals thereto or receive signals therefrom (e.g., paragraph [0077]), the method comprising the steps of: equipping at least a sub-set of the first sub-set of assembly components with wireless receivers (e.g., Figure 11, elements AP5 and AP6) for receiving wireless signals from the at least one WID; receiving WID signals via the receivers (e.g., paragraph [0077]); and using at least a sub-set of the received signals to determine WID location (e.g., paragraph [0077]).

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

25. Claims 3, 5-11, 25-27, 41-47, 49, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Meyer et al. (US 2005/0021158) (hereinafter De Meyer).

26. As per claim 3, it is rejected for reasons as given above for claim 2. De Meyer does not specifically show at least one of the automated assembly components includes a mounting surface accessible within the environment and proximate the automated assembly and wherein the HMI is mounted to the mounting surface. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that at least one of the automated assembly components could include a mounting surface accessible within the environment and proximate the automated assembly and wherein the HMI is mounted to the

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mounting surface as the HMI could be located anywhere within the environment (e.g., proximate the automated assembly) as a particular circumstance warranted.

27. As per claim 5, it is rejected for reasons as given above for claim 2. De Meyer does not specifically show that the HMI includes the processor for determining location. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the HMI could include the processor for determining location as the processor could be located anywhere within the system as a particular circumstance warranted.

28. As per claim 6, it is rejected for reasons as given above for claim 5. De Meyer does not specifically show that the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the location determining software could cause the processor to perform a statistical analysis on the received signals to determine WID location as statistical processing of received signals is a well known mechanism of location determination.

29. As per claim 7, it is rejected for reasons as given above for claim 1. De Meyer does not specifically show that the first component is linked to the controller via a communication network and is also linked to the processor via the communication network. However, De Meyer does show the use of a network linking the various components thereof (e.g., Figure 11, element CN). It would have been obvious to one of ordinary skill in the art at the time the invention was made that a processor could be part of the claimed system per the claim 1 rejection above and that a network could link the various system components (including this processor) as this is a well-known function of networks.

30. As per claim 8, it is rejected for reasons as given above for claim 7. De Meyer does not specifically show the network is an Ethernet network. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the network could be an Ethernet network as this is but one of many well-known varieties of network that could be utilized as desired.

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31. As per claim 9, it is rejected for reasons as given above for claim 7. Further, De Meyer shows the processor as part of the controller (e.g., paragraph [0077], "The position ... central server").

32. As per claim 10, it is rejected for reasons as given above for claim 7 and for reasons similar to those given above re claim 6.

33. As per claim 11, it is rejected for reasons as given above for claim 1. Further, De Meyer shows the apparatus further includes at least a second receiver also providing received signals to the processor (e.g., Figure 11, portion of element AP6, paragraph [0077], "The receiving devices..."). De Meyer does not specifically show that show locations of the first and second receiver relative to the automated assembly and that the processor could determine WID location as a function of the signals received from each of the first and second receivers. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the receivers could be located anywhere relative to the automated assembly as a particular circumstance warranted and that a processor could be present and could be used to determine WID location as a

function of the signals received from each of the first and second receivers as this represents well-known triangulation location determination.

34. As per claim 25, it is rejected for reasons as given above for claim 24 and for reason similar to those given above for claim 3.

35. As per claim 26, it is rejected for reasons as given above for claim 24 and for reasons similar to those given above for claim 5.

36. As per claim 27, it is rejected for reasons as given above for claim 23 and for reasons similar to those given above for claim 6.

37. As per claim 41, it is rejected for reason as given above for claim 40 and for reasons similar to those given above for claim 2. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made that receiver could be embedded in the HMI as the receiver could be located anywhere within the automated environment as a particular circumstance warranted.

38. As per claim 42, it is rejected for reasons as given above for claim 41 and for reason similar to those given above for claim 3.

39. As per claim 43, it is rejected for reasons as given above for claim 41 and for reasons similar to those given above for claim 4.

40. As per claim 44, it is rejected for reasons as given above for claim 41 and for reasons similar to those given above for claim 5.

41. As per claim 45, it is rejected for reasons as given above for claim 44 and for reasons similar to those given above for claim 6.

42. As per claim 46, it is rejected for reasons as given above for claim 45. Further, De Meyer shows receiving additional WID signals via other receivers (e.g., Figure 11, portion of element AP6, paragraph [0077]), providing the other received signals to the processor (e.g., paragraph[0077]). De Meyer does not specifically show performing the statistical

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analysis on the received WID signals. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the method could perform the statistical analysis on the received WID signals as statistical processing of received signals is a well-known mechanism of location determination.

43. As per claim 47, as best understood, it is rejected for reasons as given above for claim 46. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the system of claim 46 with an existing network having access points where the WID signals could be obtained from these access points as this is a well-known communication system structure.

44. As per claim 49, it is rejected for reasons as given above for claim 40 and for reasons similar to those given above for claim 6.

45. As per claim 65, it is rejected for reasons as given above for claim 64 and for reason similar to those given above for claim 41.

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Allowable Subject Matter


46. Claims 28-39, 48, and 52-63 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas M. Shute whose telephone number is (571) 272-3690. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


November 8, 2005


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